

Amendments to the Specification

Please amend paragraph [0004] of the specification as follows:

[0004] An example of a network employing CSMA/CA techniques is described in United States Patent Number 6,404,756, issued on June 11, 2002, U.S. patent application Serial No. 09/705,588, the entire contents of which is incorporated herein by reference. In this type of network, a plurality of nodes communicate with each other using plural, shared parallel data channels and a separate reservation channel. As used herein, the term node refers to a communication device operating in a network of communication devices. The node may be a mobile communication device, such as a radio or wireless telephone, or the node may be stationary or fixed in a particular location. Also, as used herein, the term channel refers to a communication path between nodes, and different channels can exist on separate communication media or on a common communication medium, with individual channels being separated by any suitable means, such as time, frequency, or encoding.

Please amend paragraph [0006] of the specification as follows:

[0006] As can be appreciated by one skilled in the art, the performance of multi-channel multi-hop ad-hoc wireless local area networks (LANs) are highly dependent on the amount of time required to make a reservation for a data channel. An improved channel access protocol for use by nodes having a single receiver configuration in an ad-hoc communications network employing multi-channel carrier-sense multiple access with extended collision avoidance (MC-CSMA/E-CA) is described United States [U.S. p]] Patent application Serial No. 6,768,730 issued on July 27, 2004 09/973,799, filed on October 11, 2001, the entire contents of which being incorporated herein by reference. This protocol negotiates the channel, data rate, power level, and message length between a pair of ad-hoc nodes via the Request-To-Send/Clear-To-Send (RTS/CTS) protocol. Because the network contains data rate adaptation, the RTS/CTS may be sent out at the lowest data rate and the highest power level to maximize the coordination of the reservation channel. If the data rate for the message channel is high, the amount of time spent on the data channel can be comparable to the amount of time required for the reservation. Accordingly, it is especially important to minimize the number of bits required to accomplish a reservation. This requirement can be balanced against the requirements to reliably contact the

destination address, to negotiate higher data rates that are especially important for large messages, and to use message length to declare the length of the reservation.

Please amend paragraph [0007] of the specification as follows:

[0007] It should also be noted that in the type of multi-hop ad-hoc wireless network described in United States [[U.S. p]] Patent ~~application~~-Serial No. 6,768,730 ~~09/973,799~~ referenced above, the transceivers of the nodes use spreading codes to spread the messages being transmitted to other nodes for reasons such as to reduce message receipt errors and improve the bit error rate (BER) ratio, to name a few. Other types of spreading techniques are set forth in U.S. Patent No. 5,943,322 to Mayor, the entire content of which is incorporated herein by reference. As can be appreciated by one skilled in the art, the use of multiple spreading codes and multiple channels by neighboring nodes in a network thus provides for better geographic reuse of channels, reduces the hidden terminal problem, and reduces destructive interference caused by messages received by a node from other nodes outside of the reliable reception range.

Please amend paragraph [0008] of the specification as follows:

[0008] For example, the modem of any node in the network described in United States [[U.S. p]] Patent ~~application~~-Serial No. 6,768,730 ~~09/973,799~~ can use gold codes for direct sequence spreading. In one exemplary configuration, a total of 129 codes are available for use. In order for a destination node to properly be able to receive the spread transmitted message, the destination node must know the spreading code that was used by the transmitting node to spread the transmitted message. One approach for enabling a transmitting node to indicate to a destination node the particular spreading code that it has used to spread a transmission message is to provide this information in the RTS message. However, designation of the spreading code would require an additional 7 bits in the RTS message at an additional cost of 14 microseconds. Currently, in the network described in United States [[U.S. p]] Patent ~~application~~-Serial No. 6,768,730 referenced above, the RTS length is 61 bits and the information rate is 500 kbps for a total length of 122 microseconds. Adding these bits to designate code increases the length of the RTS by 11 %. Additionally, these bits must be replicated within the CTS to inform nodes which can hear the destination node but not the source node. These other nodes are thus required to designate the code as "in use" to avoid a competing transmission.

Please amend paragraph [0019] of the specification as follows:

[0019] As shown in Fig. 2, each mobile node 102, fixed node 106 or wireless router 107 includes a modem which is essentially a transceiver 108 including a transmitter and a receiver, which collectively can be referred to as a modem, and which are coupled to an antenna 110 and capable of respectively transmitting and receiving signals, such as packetized data signals, under the control of a controller 112. The packetized data signals can include, for example, voice, data or multimedia. Each node 102, 106, 107 further includes a memory 114, which can include a random access memory (ROM) for storing information pertaining to the operation of the node 102, 106, 107 and a random access memory (RAM) for storing information such as routing table information and the like in accordance with which data packets are transmitted, received and routed by the transceiver 108. Further details of these types of ad-hoc networks are described in U.S. patent ~~application Serial No. 7,072,650 09/897,790~~ entitled "Ad Hoc Peer-to-Peer Mobile Radio Access System Interfaced to the PSTN and Cellular Networks", issued on July 4, 2006 ~~filed on June 29, 2001~~, and in U.S. patent ~~application Serial No. 6,807,165 09/815,157~~ entitled "Time Division Protocol for an Ad-Hoc, Peer-to-Peer Radio Network Having Coordinating Channel Access to Shared Parallel Data Channels with Separate Reservation Channel", issued on October 19, 2004 ~~filed on March 22, 2001~~, the entire content of both of said patent applications being incorporated herein by reference.

Please amend paragraph [0020] of the specification as follows:

[0020] Each mobile node 102, fixed node 106 and wireless router 107 can communicate over plural data channels as well as a reservation channel, as described in U.S. patent ~~application Serial Nos. United States Patent Number 6,404,756 09/705,588 and 6,768,730 09/973,799~~, referenced above. These channels are not limited to any particular architecture or configuration, so long as each node 102, 106, 107 has the ability to access the channels. The channels can exist over any communication medium, such as wire, optical fiber, or wireless (over-the-air), and may employ any suitable transmission protocol.